

Abstract of the Disclosure

A beamforming system and method. The inventive beamforming system [[(100)]] is adapted for use with an array antenna [[(112)]] having a plurality of antenna elements [[(1 - 7)]] and includes [[an FFT (122)]] a Fast Fourier Transform (FFT) for transforming a signal received by an antenna into a plurality of frequency subbands. A plurality of adaptive processors [[(800)]] are included for performing adaptive array processing on each of the subbands and providing a plurality of adaptively processed subbands in response thereto. A normalizing processor [[(900)]] is also included for normalizing the adaptively processed subbands. In the illustrative embodiment, the signal is a [[GPS]] Global Positioning System (GPS) signal and a digital multiplier [[(126)]] for applying a weight to a respective frequency subband for each of the elements of the array. The weights are chosen to steer a beam in a direction of a desired signal. Normalization involves adjusting the amplitude of one or more of the subbands to remove any bias distortion due to the adaptive processing thereof.